IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A process for recognition of vehicle lane markings from image data, comprising:

evaluating morphological characteristics of vehicle lane markings using *a priori* knowledge, and

using a matched-filter in order to extract image points ~~(pixels)~~, which are associated with vehicle lane markers, by measuring the average gray value of the background in the environment of the position to be examined, and evaluating an image point, which is potentially to be associated with the vehicle lane marking, on the basis of a comparison between background noise, the average gray value in the environment, and a gray value of the position to be examined.

2. (currently amended) ~~A~~ The process according to Claim 1, wherein from the image data, areas are extracted for processing, in which vehicle lane markings ~~(ROI, regions of interest)~~ are contained with high probability based upon *a priori* knowledge.

3. (currently amended) ~~A~~ The process according to Claim 2, wherein the a priori knowledge is based upon at least one of:

a camera geometry, ~~and/or~~
a geometry of the vehicle track, ~~and/or~~
dimensions of the vehicle lane markings and ~~and/or~~
a vehicle position.

4. (currently amended) ~~A~~ The process according to Claim 2, wherein in initialization of the process for recognition of vehicle lane markings model parameters are varied at random sequence so long until vehicle lane markings are found.

5. (currently amended) ~~A~~ The process according to Claim 4, wherein the model parameter draws upon at least one of:
the width of the vehicle lane, ~~and/or~~
orientation of the camera with respect to the center of the vehicle lane and ~~and/or~~
the yaw angle of the vehicle.

6. (currently amended) ~~A~~ The process according to Claim 2, wherein for repositioning of already initialized ROI parameter predictions, a vehicle street model based on a prediction of an evaluation process is drawn upon for parameter determination.

7. (currently amended) ~~A~~ The process according to Claim 6, wherein the evaluation process for parameter determination is based upon a Kalman-filter.

8. (currently amended) ~~A~~ The process according to Claim 6, wherein in the repositioning of the ROI, its values are controlled by variation of the result values of the prediction of the Kalman-filter, when the width is adapted proportionally to the size of the variation of the results.

9. (currently amended) ~~A~~ The process according to Claim 2, wherein the ROI is limited vertically on the basis of a minimal and a maximal distance in the street plane.

10. (currently amended) ~~A~~ The process according to Claim 9, wherein in particular in application of the process at night, the vertical limitation of the ROI is determined by the area of the maximal illumination (high beam, low beam).

11. (currently amended) ~~A~~ The process according to Claim 9, wherein the limitation is controlled by the number of the image points expected to be associated with the vehicle lane marker, and this control or regulation is optimal when the number of the image points to be expected is constant for all distance ranges.

12. (canceled)

13. (currently amended) ~~A~~ The process according to Claim 1, wherein the matched-filter is adapted in shape and size to the vehicle lane marking being searched for and/or to the statistic of the background.

14. (currently amended) ~~A~~ The process according to Claim 1, wherein the matched-filter is implemented in separate form, in which x-y-components are presented separately.

15. (canceled)

16. (currently amended) ~~A~~ The process according to Claim 1, wherein in the evaluation of the matched-filter, only the x-component is evaluated.

17. (currently amended) ~~A~~ The process according to Claim 1, wherein after the extraction of the image points ~~(pixel)~~, which are to be associated with vehicle lane markings, these are digitized, wherein the intensities of the individual image points ~~pixels~~ are compared with a threshold value, and the image points ~~pixels~~ are only then drawn upon for further evaluation when their intensity exceeds this threshold.

18. (currently amended) ~~A~~ The process according to Claim 17, wherein the threshold value is determined from background noise using a threshold value regulator or controller.

19. (currently amended) A process ~~according to Claim 18, wherein~~ for recognition of vehicle lane markings from image data, comprising:

evaluating morphological characteristics of vehicle lane markings using *a priori* knowledge,

using a matched-filter in order to extract image points, which are associated with vehicle lane markers, by measuring the average gray value of the background in the environment of the position to be examined, and evaluating an image point, which is potentially to be associated with the vehicle lane marking, on the basis of a comparison between background noise, the average gray value in the environment, and a gray value of the position to be examined,

wherein after the extraction of the image points, which are to be associated with vehicle lane markings, these are digitized,

wherein the intensities of the individual image points are compared with a threshold value, and the image points are only then drawn upon for further evaluation when their intensity exceeds this threshold,

wherein the threshold value is determined from background noise using a threshold value regulator or controller, and

wherein the threshold value regulator draws upon *a priori* knowledge regarding the expected surfaces occupied by the vehicle lane markings, which are directly correlated with the expected number of image points ~~(pixels)~~ associated with the vehicle lane markings, and wherein the threshold value regulator or controller thereupon aims to

supply the number of the image points extracted in the ROI preferably exactly to this expected value.

20. (currently amended) ~~A~~ The process according to Claim 1, wherein after the extraction of image points potentially belonging to a vehicle lane marker and ~~the~~ subsequent digitization, these image points are collected for the further processing into marker objects.

21. (currently amended) ~~A~~ The process according to Claim 1, wherein in the evaluation of the morphological characteristics of the vehicle lane marker, at least one of:

the size of the marking object, group of image points ~~(pixel group)~~ ~~and/or~~

the roundness of the image point ~~pixel~~ group and ~~and/or~~

the distribution of the image points ~~pixels~~ or the number of empty spaces within the image point ~~pixels~~ group ~~(compactness, clustering)~~

is evaluated with respect to whether they satisfy criteria of a vehicle lane marker defined in accordance with *a priori* knowledge.

22. (currently amended) ~~A~~ The process according to Claim 21, wherein each image point ~~pixel~~ group, which satisfies the criteria of a vehicle lane marker, is considered to be an

actual marker object and is characterized by its image coordinates.

23. (currently amended) ~~A~~ The process according to Claim 22, wherein as characterizing image coordinates, the coordinates of the center of gravity of the image point ~~pixel~~ group associated with the marking object is selected.

24. (currently amended) ~~A~~ The process according to Claim 20, wherein the characteristic image coordinates of the marking object are employed in order with curve regression to describe the boundaries of the own vehicle lane with respect to the course of the vehicle track, as well as to describe the own position with respect to the vehicle lane center, and that this description is provided to an estimation process for parameter determination for repositioning of the ROI within the image data.